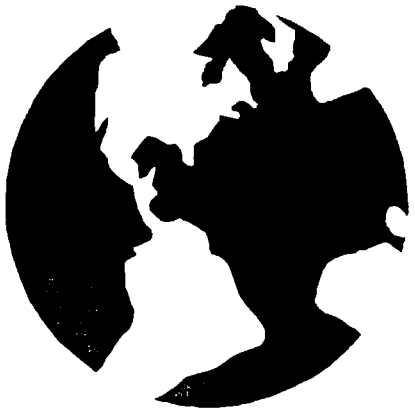
Pilot-Scale Soil Characterization Study



VBI70 Workgroup Meeting
April 20, 2000

PURPOSE

Determine whether the source of arsenic in residential soils can be identified by characterizing and comparing the physical and chemical characteristics of residential soils with potential sources such as arsenical herbicides or smelter wastes.

METHOD

Using several different types of analyses, characterize both site soils and potential sources.

- Metals ratios ("fingerprint")
- Bulk soil properties (Total organic carbon, soil pH, particle size distribution, etc.)
- Geochemical speciation (As, Pb, Cd, Zn, In, Tl, Hg, Sb, Se and perlite)
- *In vitro* bioaccessibility
- Stable lead isotope ratios

SAMPLE DESCRIPTION

Description	Sample Type	Sample Quantity
Residential	High [As] - Low[As] Pairs	3
	Intermediate [As] - Low[As] Pairs	3
	Low [As] - Low [As] Pairs	3
Potential Sources	Smelter Soil	4
	Smelter Material	1
	PAX (Arsenical Herbicide)	1
Background	Baseline Site Soil	1

PROJECT STATUS

- All analyses but stable lead isotope are underway.
- Feasibility evaluation of the stable lead isotope analysis is complete.

ESTIMATED PROJECT TIMELINE

- Receive final analytical results (May-June, 2000)
- Prepare draft report (June-July, 2000)